

### REMARKS

This Application has been carefully reviewed in light of the Office Action mailed April 20, 2007. At the time of the Office Action, Claims 1, 3, 4, 7-10, 13 and 14 were pending in this Application. Claims 1, 3, 4, 7-10, 13 and 14 were rejected. Claims 2, 5 and 6 were previously cancelled without prejudice or disclaimer and Claims 11, 12 and 15-36 were previously cancelled due to an election/restriction requirement. Applicant respectfully requests reconsideration and favorable action in this case.

#### Rejections under 35 U.S.C. § 112

Claims 1, 3, 4, 7-10, 13 and 14 were rejected by the Examiner under 35 U.S.C. §112, second paragraph, as being indefinite and failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner states that the recitation of "said material" in Claim 1 lacks antecedent basis. Applicant disagrees. A review of Claim 1 shows that Applicant claims, *inter alia*, "a plurality of molecules bound together to surfaces of a fused fiber porous **material** . . . predetermined region of the porous **material**, **said material** . . ." (emphasis added) Consequently, "said material" refers back to the "porous material" and does not lack antecedent basis. Applicant respectfully requests withdrawal of the objection.

#### Rejections under 35 U.S.C. §103

Claims 1, 3, 4, 7-10, 13 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over "High Surface Area Substrates for DNA Arrays" *Materials Research Society Symposium Proceedings*, p. 371-376, by M. Glazer et al. ("Glazer") and U.S. patent No. 5,629,186 issued to Robert D. Yasukawa et al. ("Yasukawa") Claims 1, 3, 4, 7-10, 13 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. patent No. 5,959,098 issued to Martin Goldberg et al. ("Goldberg") and Yasukawa. Applicant respectfully traverses and submits that the cited art combinations, even if proper, which Applicant does not concede, do not render the claimed embodiment of the invention obvious.

In order to establish a *prima facie* case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Furthermore, according to § 2143 of the Manual of Patent Examining Procedure, to establish a *prima facie* case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Claim 1 claims, *inter alia*, "all of said material consists of a density of at least six pounds per cubic foot." The Examiner argues, in relation to all cited art combinations, as follows:

In addition, Yasukawa et al. disclose that all of said material consists of a density of about six pounds per cubic foot (**e.g., see claim 8**, see also column 1, line 29).

(Office Action, pp, 5, 10, & 13)(emphasis added)

This is clearly incorrect. Yasukawa requires that his material consist of at least a portion having a density below 6 pounds per cubic foot, *i.e.*, "3.5 - 5.0 pounds/ft<sup>3</sup>." Indeed, claim 8 reads as follows:

The matrix of claim 1 having, in one matrix dimension, a matrix gradient **progressing between a selected density 3.5 - 5.0 pounds/ft<sup>3</sup> to a selected density 5.5 to 12 pounds/ft<sup>3</sup>.**

(Yasukawa, Claim 8, lines 11 - 13)(emphasis added) Clearly, Claim 8 requires some portion of the matrix material to have a density between 3.5 - 5.0 pounds/ft<sup>3</sup>; otherwise, it is impossible to have a material "gradient progressing between a selected 3.5 - 5.0 pounds/ft<sup>3</sup> to a selected density of 5.5 to 12 pounds/ft<sup>3</sup>."(emphasis added) Moreover, this is confirmed by Claim 1 from which Claim 8 depends which claims " a density of between 3.5 and 5.5 pounds/ft<sup>3</sup>" as follows:

1. A porous matrix composed of fused fibers of silica, alumina, or silica and alumina and characterized by:

(a) . . .

(b) **a density of between about 3.5 and 5.5 pounds/ft<sup>3</sup>**; and

(c) . . .

(Yasukawa, col. 17, lines 6 - 14, *i.e.*, Claim 1)(emphasis added)

Thus, all of Yasukawa's claims require a portion of the material to have a density below 6.0 pounds/ft<sup>3</sup>, *i.e.*, to have "a density of between about 3.5 and 5.5 pounds/ft<sup>3</sup>." The presently claimed invention is directed to a material which expressly excludes materials having a density below 6.0 pound/ft<sup>3</sup>, *i.e.*, the presently pending Claim 1 requires "**all** of said material **consists** of a density of **at least six** pounds per cubic foot." (See Claim 1)(emphasis added) Please note the "all of the material consists of" language.

The Examiner also cites to "column 1, line 29" of Yasuhawa as disclosing material consisting of "a density of at least 6 pounds per cubic foot" as follows:

In addition, Yasukawa et al. disclose that all of said material consists of a density of about six pounds per cubic foot (**e.g., see claim 8, see also column 1, line 29**).

(Office Action, pp. 5, 10, & 13)(emphasis added) This is also incorrect. Column 1, line 29 of Yasukawa states as follows:

(b) a density of **between** about 3.5 and 5.5 pounds/ft<sup>3</sup> . . .

Column 1, line 29, of Yasukawa confirms the Applicant's position that the material of Yasukawa requires a portion that has a density of "between 3.5 and 5.5 pounds/ft<sup>3</sup>." It is not seen how Column 1, line 29 of Yasukawa discloses "all of said material consists of a density of at least six pounds per cubic foot" as claimed. It is beyond refute that column 1, line 29 of Yasukawa discloses a material having a density clearly below 6 pounds/ft<sup>3</sup>. In fact,

Yasukawa teaches to use a material having a density of “between about 3.5 and 5.5 pounds/ft<sup>3</sup>.” Claim 1’s recited density of at least 6 pounds/ft<sup>3</sup> is clearly distinguishable from the art cited. Applicant submits the art cited does not teach the claimed density and thus, believes the claims are in condition for allowance. Favorable action is requested.

**CONCLUSION**

Applicant believes that this paper contains a reply to each ground of objection and rejection in the Office Action. Applicant respectfully requests reconsideration of the pending claims.

Applicant encloses a Petition for Extension of Time for Three (3) months and authorizes the Commissioner to charge the \$510.00 fee for the Extension of Time, and any additional fees required, to Deposit Account 50-2148, in order to effectuate this filing.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's attorney at 512.322.2606.

Respectfully submitted,  
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